

REMARKS

Applicant has carefully reviewed the Office Action dated October 17, 2006. Claims 1-20 are pending in this action. In this response, claims 1-12 and 19-20, which were previously withdrawn from consideration, are cancelled. Claims 13, 17 and 18 are amended as described below. New dependent claims 21-23 have been added. Reconsideration and favorable action is respectfully requested.

Claims Rejections – 35 USC § 112

Claims 17 and 18 stand rejected under 35 U.S.C. § 112, as being indefinite for failing to particularly point out and distinctly claim the subject matter which is regarded as the invention. This rejection is respectfully traversed.

Applicant has amended claims 17 and 18 to clarify which “sheets” of the parent claim 13 are referred to in the respective dependent claims. In particular, claims 17 and 18, as amended, now recite limitations with respect to the sheet of strength-reinforced transparent material, the first transparent windowpane sheet and the second transparent windowpane sheet. As such, the particular metes and bounds for which applicant seeks patent protection are rendered clear and definite. Accordingly, reconsideration and withdrawal of the rejection of claims 17 and 18, as amended, under 35 U.S.C. § 112 is respectfully requested.

Claims Rejections – 35 USC § 102(b)

Claims 13, 14, and 16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Martin* (US 3410674). These rejections are respectfully traversed.

With respect to claim 13, it is alleged that *Martin* discloses providing a sheet of strength-reinforced transparent material and first and second transparent windowpane sheets as claimed, and then applying a predetermined contact pressure at a predetermined temperature in order to

achieve a seal between the three sheets. (See Office Action, pg. 3). However, a close review of the cited portions of *Martin* reveals that what is actually disclosed is the bonding of a sheet of devitrified sealing glass to one or more preformed bodies. (See *Martin*, col. 4, lines 24-47). The sealing glass disclosed in *Martin* is consistently described as a high lead (Pb), low silica containing composition. In particular, Example 1 discloses a sealing glass containing 68% PbO and 7.5% SiO₂ (see *Martin*, col. 5, lines 13-16); Example 2 discloses a sealing glass containing 68% PbO and 7.5% SiO₂ (see *Martin*, col. 5, lines 29-31); Example 3 discloses a sealing glass containing 63% PbO and 7.5% SiO₂ (see *Martin*, col. 5, lines 34-36); Example 4 discloses a sealing glass containing 68% PbO and 7.5% SiO₂ (see *Martin*, col. 5, lines 50-52); Claim 1 discloses a sealing glass containing 60-80% PbO and 5-20% SiO₂ (see *Martin*, col. 5, lines 67-73); Claim 3 discloses a sealing glass containing 60-80% PbO and 5-20% SiO₂ (see *Martin*, col. 6, lines 24-30); and Claim 4 discloses a sealing glass containing 60-80% PbO and 5-20% SiO₂ (see *Martin*, col. 6, lines 50-57).

Martin discloses that the sealing glass may be used to bond “pre-formed bodies” of low expansion glasses, ceramics, refractory metals and alloys, and ductile metals such as aluminum, copper and platinum. (See *Martin*, col. 4, lines 48-57). Of these materials, only the low expansion glasses may be considered transparent as claimed in the instant application. In particular, *Martin* discloses use of the following low expansion glasses for the pre-formed bodies: Example 1 - a hard borosilicate glass containing 67% SiO₂ and 15% B₂O₃ (see *Martin*, col. 5, lines 20-22); and Claim 6 – a hard, borosilicate glass (see *Martin*, col. 6, lines 72-74).

It will be appreciated that high lead, low silica containing glasses used for the sealing glass of *Martin* may be characterized as being weaker and less durable than high silica glasses such as the borosilicate used for the pre-formed bodies of *Martin*. Typical fracture toughness values for fused silica, conventional soda lime silicate, Pyrex borosilicate, aluminosilicate, and lead silicate (61% PbO, 35% SiO₂ and 4% Na₂O) are 0.75, 0.70, 0.77, 0.85, and 0.63 MPa /m², respectively (see A.K. Varshneya, *Fundamentals of Inorganic Glasses*, pg. 443, submitted concurrently herewith in a Supplemental IDS). It will be noted that the silica content of the sealing glass in *Martin* is even lower than that of the lead silicate cited in *Varshneya*, and thus

would be expected to be weaker and less durable. Thus, it must be concluded that the sheet of sealing glass disclosed in *Martin* would not exhibit significantly greater tensile strength, impact resistance or environmental resistance than the hard borosilicate glass of the pre-formed bodies to which they are bonded.

In contrast, the instant application clearly defines that the strength-reinforced transparent material recited in claim 13 is stronger than the sheets to which it is bonded. In particular:

It will be appreciated that, for purposes of this application, the terms “strength-reinforced material” and “strength-reinforcing material” refer to materials having a significantly greater tensile strength and/or significantly greater impact resistance and/or significantly greater environmental resistance (e.g., abrasion resistance, solvent resistance, resistance to high or low pH, etc.) than the adjacent windowpane material. (Specification, paragraph 0019).

Applicant has amended claim 13 to further clarify the nature of the strength-reinforced transparent material consistent with the original disclosure. Specifically, claim 13, as amended, recites that at least one of the tensile strength, impact resistance and environmental resistance of the strength-reinforced material is significantly greater than the corresponding tensile strength, impact resistance or environmental resistance of both of the windowpane sheets. In other words, either the tensile strength of the strength-reinforced material is significantly greater than the tensile strength of either of the windowpane sheets, or the impact resistance of the strength-reinforced material is significantly greater than the impact resistance of either of the windowpane sheets, or the environmental resistance of the strength-reinforced material is significantly greater than the environmental resistance of either of the windowpane sheets. As shown above, *Martin* discloses a sealing glass that is weaker than the transparent material to which it is bonded, not stronger. Thus, *Martin* does not disclose all of the limitations of the claimed invention. Accordingly, reconsideration and withdrawal of the rejection of claim 13, as amended, is respectfully requested.

Claims 14 and 16 depend from claim 13. By application of the same arguments presented with respect to claim 13, it is believed that *Martin* does not disclose all of the limitations of claims 14 and 16, and that they are allowable. Accordingly, reconsideration and withdrawal of the rejection of claims 14 and 16 is respectfully requested.

Claim Rejections – 35 USC § 103

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Martin* as applied in the rejection of claim 13 under 35 U.S.C. §102(b). Claim 15 depends from claim 13. By application of the same arguments presented with respect to claim 13, it is believed that *Martin* does not teach or suggest the limitations of claim 15, and that it is therefore allowable. Accordingly, reconsideration and withdrawal of the rejection of claim 15 is respectfully requested.

Claims 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Martin* as applied to claim 13 above, and in further view of the general teaching on the physical properties of Pyrex borosilicate glass (Wikipedia article) and the general teachings set forth by *Bayrashev et al.*

Applicant first respectfully traverses the examiner's citation of an article from Wikipedia.org dated October 11, 2006 as a reference in this case. Wikipedia articles are not a reliable indicator of the state of the art, and certainly do not represent the understanding of one of ordinary skill in the art at the time of the invention. The following is a quotation from the Wikipedia website:

Because Wikipedia is an ongoing work to which in principle anybody can contribute, it differs from a paper-based reference source in some very important ways. In particular, older articles tend to be more comprehensive and balanced, while newer articles may still contain significant misinformation, unencyclopedic content, or vandalism. Users need to be aware of this in order to obtain valid information and avoid misinformation which has been

recently added and not yet removed. (Wikipedial “About” page on 4/17/07, <http://en.wikipedia.org/wiki/Wikipedia:About> (emphasis added)).

As previously indicated, claims 17 and 18 have been amended to clarify the meaning of the “sheets.” It is understood that the examiner’s rejection of claims 17 and 18 was based on an interpretation that “sheets” referred only to the first and second windowpane sheets, rather than all three sheets. Review of this point is requested. In addition, claims 17 and 18 depend from claim 13. By application of the same arguments presented with respect to claim 13, it is believed that *Martin* does not teach or suggest the limitations of claims 17 and 18, as amended, and that they are therefore allowable. Accordingly, reconsideration and withdrawal of the rejection of claims 17 and 18, as amended, is respectfully requested.

New claims 21-23 are dependent claims depending from claim 13. They further claim subject matter disclosed in the original disclosure, and do not add any new matter. Favorable consideration of these claims is requested.

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Applicant has now made an earnest attempt in order to place this case in condition for allowance. For the reasons stated above, Applicant respectfully requests full allowance of the claims as amended. Please charge any additional fees or deficiencies in fees or credit any overpayment to Deposit Account No. 20-0780/STRK-26,696 of HOWISON & ARNOTT, L.L.P.

Respectfully submitted,
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